

CLAIMS

I claim:

1. A computer system, the system comprising:
one or more terminals; and
5 a central server in communication with the one or more terminals;
wherein the central server generates data indicative of a frame buffer for
each of the one or more terminals and transmits the frame buffer data to
the terminals.
- 10 2. The system as recited in claim 1, wherein the central server is
remote from the one or more terminals and is in communication via a
network.
3. A method in a computer system for generating and displaying
15 graphics on a display screen, the method comprising:
generating frame buffer image data comprising the graphics to be
displayed; and
transmitting the frame buffer image data to a terminal.
- 20 4. The method as recited in claim 3, wherein the frame buffer image
data of all the possible states of an object are transferred to the terminal
before they are needed; and including the step of

transmitting a command to indicate which frame buffer image data should be rendered at the terminal.

5. The method as recited in claim 3, further comprising:

5 encoding image data color information;

reducing the number of bits representative of pixel color depth in the generated frame buffer image;

sending a limited number of bits to the terminal for rendering the graphics; and

10 decoding the reduced bit representation at the terminal.

6. The method as recited in claim 3, further comprising:

generating a second set of frame buffer image data comprising the graphics to be displayed as an update of the first frame buffer image data;

15 determining any changes between first frame buffer image data and the second frame buffer image data; and

transmitting the changes to the terminals.

7. The method as recited in claim 3, wherein an algorithm is applied to inversely relate the rate of display of the frame image data to the resolution of the displayed image, to maintain the quantity of transmitted data.

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8. The method as recited in claim 6, wherein an algorithm is applied to inversely relate the rate of display of the frame image data to the resolution of the displayed image, to maintain the quantity of transmitted data.

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9. The method as recited in claim 3 further comprising:
computing of a frame rate of transmission;
incorporating of said frame rate into the image data that is to be displayed;
10 varying the frame rate of transmission on a per-frame basis;
selecting and transmitting the best frame image data either in its entirety or in portions.

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10. A computer readable medium having computer executable instructions for performing the method recited in claim 3.

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11. A computer system having a processor, a memory and an operating environment, the computer system operable to execute the method in claim 3.

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12. A method for communicating between a terminal process and a central server process, the method comprising:

issuing by the central server process; frame buffer image data indicative of
a screen image to be displayed by the terminal;
receiving by the terminal process the frame buffer image data;
displaying by the terminal process the frame buffer data on a display
5 screen;
receiving by the terminal process input indicative of a user action;
transmitting by the terminal process the input to the central server; and
issuing of frame buffer image data by the central server process indicative
of the change in the frame buffer data corresponding to the user action
10 input.

13. The method as recited in claim 12, wherein the user action includes
receiving an input from a user selection device.

14. The method as recited in claim 13, wherein the user selection
15 device is a mouse, a keyboard or other user input device.

15. The method as recited in claim 12 further comprising:
generating a graphic indicative of the user action.

20 16. The method as recited in claim 15, wherein said graphic is a cursor
image, local mouse pointer or keyboard entered character.

17. A computer readable medium having computer executable instructions for performing the method recited in claim 12.

18. A computer system having a processor, a memory and an operating environment; the computer system operable to execute the method in claim 12.

19. A method for generating an updated character transmission, the method comprising:

generating a display screen to be displayed;
transmitting the display screen to a terminal;
characterizing the display screen into two or more areas;
storing textual characters within the two or more areas in a memory;
generating an updated display screen;
comparing the textual characters within the two or more areas of the updated display screen with the textual characters in the memory; and
transmitting to the terminal only the areas having different textual characters in the updated display screen.

20. The method as recited in claim 19, wherein said textual character is locally rendered by the terminal.

21. The method as recited in claim 20, wherein the textual character is overwritten by a subsequent character generated at a central server.

22. A computer readable medium having computer executable instructions for performing the method recited in claim 19.

23. A computer system having a processor, a memory and an operating environment, the computer system operable to execute the method in claim 19.

24. In a computer system having a graphical user interface including a display and a user interface selection device; a method of generating graphics indicative of a user selection device; the method comprising:
receiving data indicative of a bitmap image to be displayed on the display screen;
receiving data indicative of an input from the user selection device;
displaying a graphic indicative of a movement of the user selection device corresponding to the input from the user selection device;
transmitting the data indicative of the input from the user selection device;
and
receiving data indicative of a change in bitmap image to be displayed corresponding to the input from the user selection device.

25. In a computer system having audio capability including a terminal process and a central server process, a method of handling audio data connections comprising:

routing connection at the central server to one or more terminals;

5 initiating calls from a terminal; and

receiving and processing connections from a single user at one or more terminals to make the call.

26. The method in claim 25 wherein, a first terminal initiates a call via a connection to the central server and a second terminal is able to receive and maintain said connection.

27. The method in claim 25 further comprising:

encoding the data associated with the connection to enhance security and data compression.

28. A computer readable medium having computer executable instructions for performing the method recited in claim 25.

29. A computer system having a processor, a memory and an operating environment, the computer system operable to execute the method in claim 25.